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The 51st Anniversary of the Army Nurse Corps was commemorated on 2 February 1952 by US Army personnel around the world. The celebrations were staged in various ways. Many "birthday" parties were held such as this one at the 3rd and 14th Field Hospitals in Korea -- others paused in their preoccupations to give mute thanksgiving to those whose lives are dedicated to the relief of suffering among the armed forces of all nations -- while still others paid tribute to the Corps through their utterances to the press and radio. Among the many messages broadcast throughout the world on this auspicious occasion included those by ---



General Matthew B. Ridgway:

"As Commander-in-Chief of the United Nations Forces in the Far East Command, I take great professional pride and personal pleasure in paying tribute to all members of the Army Nurse Corps on their 51st anniversary.

"However, a mere statement or a one-day tribute cannot convey my humble gratitude to the gallant women whose deeds are being written proudly into the record of free man's unending struggle against tyranny and oppression. As a soldier, I daily feel grateful for your humanitarian assistance, without which we could not accomplish the tasks we have been assigned.

"The Army nurses serving with me in the Far East Command have shown courage and endurance of the highest order in ministering to the sick and wounded.

"By their constant and selfless care of soldiers of all United Nations Forces serving in this theater, they have become effective ambassadors of good-will. They have made friendships universally that will endure to the credit of America and the Army Nurse Corps.

"To all members of this splendid Corps, serving throughout the world, I offer my heartiest congratulations on your fine record of achievement and sincere best wishes for your continued future success."

General James A. Van Fleet:

"Today the American Army honors a branch of its service that has added chapter after chapter to its illustrious history for the past 51 years-- the Army Nurse Corps.

"Our nurses were the first American women to render military service, the first American women to enter combat areas during World Wars I and II and the first American women to enter Korea -- where they cared for casualties ten days after our fighting troops were in action.

"The vital role they are playing in Korea today closely parallels that of the early American pioneer women who helped build America into the greatest nation in the world. Today's Army nurses are sharing a similar responsibility.

"The Army nurses serving with the Eighth Army and attached United Nations Forces in Korea have performed magnificently in keeping with their time-honored tradition. Their skill, bravery and heart-warming kindness shall never be forgotten.

"As commander of the ground forces in Korea, I am proud to have our nurses as an integral part of the greatest team in the world -- the United Nations Forces.

"To all our nurses, wherever you may be, I pay my highest tribute to your great example of American womanhood and courage which you have displayed so unselfishly to all freedom-loving countries of the world.

"My blessings and the blessings of those you have served are with you on your 51st anniversary."



THE SURGEON'S Circular Letter

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FEBRUARY 1952

General Headquarters
Far East Command
Medical Section
APO 500

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HOKKAIDO MEDICAL CONFERENCE

Under the auspices of Japan Logistical Command, the U. S. Army Hospital, Sapporo, was host for the Hokkaido Medical Conference held at the Grand Hotel on 15 February 1952. Over fifty medical officers attended, and as a continuation of the present policy of including the Japanese medical profession in educational activities, twenty-five Japanese doctors were invited from Hokkaido University School of Medicine and the Sapporo University of Medicine.

The meeting was opened with welcoming addresses by Brig General William E. Shambora, MC, Chief Surgeon FEC, Brig General James P. Cooney, MC, Surgeon Japan Logistical Command, Col Augustus A. Hall, MC, Commanding Officer US Army Hospital, Sapporo, Mr. Toshibumi Tanaka, Governor of Hokkaido, and Mr. Yosaku Harada, Vice-Mayor of Sapporo.

The subjects scheduled in the morning sessions and the leaders of these discussion were as follows: Treatment of Infectious Hepatitis, Lt Col Tyron E. Huber, MC, Chief Medical Service, US Army Hospital, Camp Yokohama; Cold Injury Case Reporting in the Field, Capt William F. Ganong, MC, 1st Cavalry Division, Chitose; Recent Advances in Cold Injury Research, Lt Col Kenneth D. Orr, MC, Chief Cold Injury Research Team, Osaka Army Hospital; Chronic Amebiasis, Col Ryle A. Radke, MC, Chief Medical Service, Tokyo Army Hospital; Interesting Case Presentations in Biliary Tract Hemorrhage, Lt Col Tillman D. Johnson, MC, Chief Medical Service, US Army Hospital, Sapporo; Massive Gastro-Intestinal Hemorrhage, Col George M. Powell, MC, Chief Medical Service, Osaka Army Hospital.

The afternoon sessions included the following studies: The Early Field Diagnosis of Epidemic Hemorrhagic Fever, Capt Carroll K. Clawson, MC, 1st Cavalry Division, Chitose; Clinical Manifestations of Epidemic Hemorrhagic Fever, Col George M. Powell, MC, Comparison of Infiltrating Lesions of the Chest, Dr. Donald S. King, Expert Consultant to the Surgeon General's Office, Brookline, Massachusetts; Migraine, Col Ryle A. Radke, MC; Therapy of Acute Respiratory Diseases, Dr. Donald S. King, Management of Diabetic Emergencies, Lt Col Tyron E. Huber, MC.

A dinner was held in the evening at the Officers' Club of the US Army Hospital, Sapporo. Father Gerhard Huber, who is an international authority on the Ainu race, was the guest speaker for the evening.

The chairmen for this conference were Col Charles L. Leedham, MC, Medical Consultant, GHQ, and Lt Col Tillman D. Johnson, MC, Chief, Medical Service, US Army Hospital, Sapporo.

At the invitation of the Hokkaido University School of Medicine, Dr. Donald S. King, Lt Col Kenneth D. Orr, MC, and Lt Col Tyron E. Huber, MC, spoke to an audience of approximately two hundred medical students and doctors in the university auditorium on 16 February. Their papers were on the following respective subjects: Therapy of Tuberculosis, Recent Advances in Cold Injury Research, and Treatment of Infectious Hepatitis. The American medical officers were well received by the assembly.

UN DOCTORS IN KOREA HOLD THREE DAY REFRESHER COURSE

More than 150 medical officers from UN organizations in Korea recently completed a three-day postgraduate refresher course in Pusan.

The first in a series of such courses to be held in future months under the sponsorship of the Eighth Army Surgeon's Office, the meeting dealt with current concepts in the diagnosis and treatment of diseases of the chest.

Through the cooperation of the Surgeon, EUSAK, and military hospitals in Korea, other postgraduate refresher courses in medicine and surgery and their sub-specialties are being organized. The courses have been arranged as a result of a unanimous desire for refresher training.

The course included a concentrated series of lectures, demonstrations, motion pictures, case presentations and discussion periods. Papers were presented covering current ideas on the chemotherapy of tuberculosis; the present trend toward surgical resection;

problems in pleurisy with effusion; the latest information on chemotherapy in acute respiratory infections, lung abscess and bronchiectasis; bronchogenic carcinoma; diffuse pulmonary lesions resembling military tuberculosis and the use of ACTH and cortisone in the treatment of lung disease.

Dr. Donald S. King, Harvard Medical School, expert consultant to the Army Surgeon General in pulmonary diseases, was the guest speaker and a director of the course.

Other course directors were: Col. L. Holmes Ginn, Jr., EUSAK Surgeon; Col. Joe A. Bain, Deputy Surgeon EUSAK; Col. Walter M. Bartlett, EUSAK Medical Consultant; Col. John H. Taber, 2d Logistical Command Surgeon; Col. John G. Baxter, Commanding Officer, 22d Evacuation Hospital; Lt. Col. John C.T.B. Bixler, Commanding Officer 14th Field Hospital; Maj. Clarence B. Pramuk, Chief of Medical Service, 14th Field Hospital; and Capt. Frederick B. Berry, Commanding Officer 3d Field Hospital.

FEC CHIEF CONSULTANT ATTENDS MEETING OF ORTHOPEDIC SURGEONS

The Far East Command Chief Consultant to the Chief Surgeon recently returned from the United States where he attended the annual meeting of the American Academy of Orthopedic Surgeons held 26-30 January in the Palmer House, Chicago, long held to be the mecca of orthopedic surgeons throughout the western hemisphere.

Colonel Oral B. Bolibaugh, the FEC Chief Consultant, was given an opportunity to discuss papers presented by several of the dignitaries present, notably those presented by Colonel Ernest A. Brav and Colonel Winde R. Jeffress, both of Letterman Army Hospital, and Commander C. R. Carr and Commander Derrick Turnipseed, USN, Oakland, California.

Of special interest to the armed services was a paper presented by Dr. Harold Boyd, Memphis, Tenn., the title of which was "Orthopedic Care of the Wounded in the Far East Command." Dr. Boyd had visited the Far East Command theater as a civilian consultant during May and June of 1951. He gave a vivid description of the medical service in Japan and Korea and was extremely commendatory of the care given to the wounded soldier and the efficient organization and operation of the Army Medical Service.

"I consider this talk of Dr. Boyd's to a group of civilian physicians from every section of the country," said Colonel Bolibaugh, "to be of inestimable value to the medical services of the Armed Forces."

The papers by Colonels Brav and Jeffress and Commanders Carr and Turnipseed were on the subject of intramedullary nailing of gunshot fracture of the femur in the presence of chronic infection and open wounds.

"This method," continued Colonel Bolibaugh, "violates all of our accepted principles regarding the management of chronically infected gunshot fractures. Strangely, enough, however, bone healing was marked and results surpassed other methods of treatment. Undoubtedly, antibiotics played an important role."

The Colonel had reported the first case of this na-

ture treated by intramedullary nailing in the United States at the annual meeting held in May, 1950.

While in the United States, Colonel Bolibaugh visited several US Army hospitals to discuss the treatment of battle casualties and to invite criticism of a constructive nature that may be of some value in this theater. On the whole, he found that patients arrived from the FEC in excellent condition, although it was suggested that mobilization of injured hands might have been started earlier. Another suggestion was that non-absorbable suture material should not be used in guillotine amputations since this material had, in some cases, caused a breeding place for infection which had kept a few stumps draining after revision.

In keeping with the established policy, a number of outstanding orthopedists from foreign countries read scientific papers. These included:

1. "Experimental Causation of Congenital Skeletal Defects and its Significance in Orthopedic Surgery." Author: P. K. Duraiswami, M.S., M. CL. Ortho., FRCS, New Delhi, India.
2. "Results of Resection-Reconstruction of the Hip with Acrylic Prosthesis." Authors: Robert Judet, M.D., and Jean Judet, M.D., Paris, France.
3. "Studies on Congenitally Dislocated Hips." Author: Erik Severin, M.D., Goteborg, Sweden.
4. "Shelf Operation for Diploma of the Acetabulum, Congenital Subluxation and Luxation of the Hip Joint." Author: Gunnar Wiberg, M.D., Lund, Sweden.

Prior to his return to the Far East Command in early February, Colonel Bolibaugh visited the office of The Surgeon General, where he had the opportunity to talk with several key officers and review the orthopedic personnel situation.

AN IMPROVEMENT IN PHARMACY TECHNIQUE

Developed by Cpl Murray H. Cohen, Tokyo General Dispensary, 8128th Army Unit

The latest innovation to be adopted by the Tokyo General Dispensary Pharmacy Section is an apparatus used to facilitate the pouring of liquids.

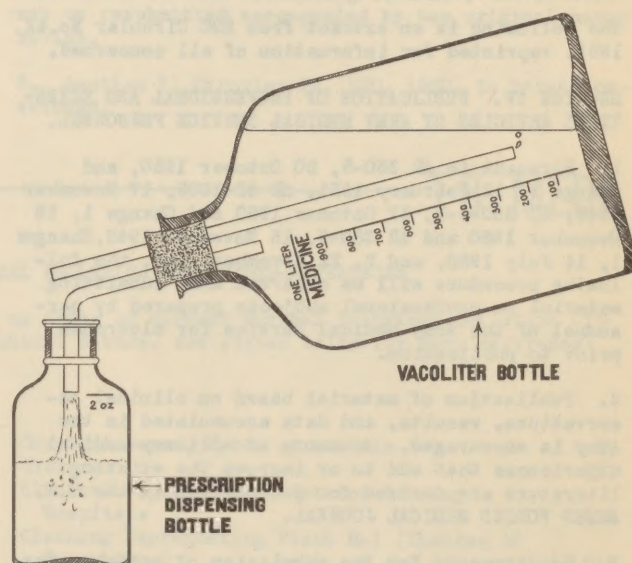
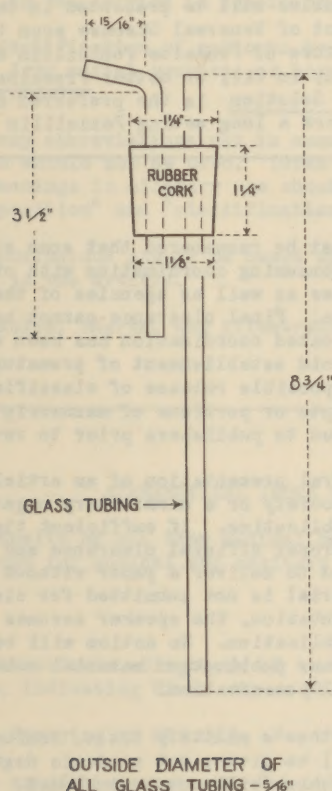
The need for an improvement in this seemingly simple task of transferring liquid medicine from stock bottle to dispensing containers arose principally because of the design of the stock bottles.

When the Pharmacy was originally organized and equipped at the beginning of the occupation, the necessity to utilize all available supplies was the chief consideration in the choice of a standard set of stock bottles for shelf use. As a result, "Vacoliter Bottles" procured from the hospital, formerly containing normal saline solution, were put into service. Unfortunately, there were many disadvantages to the use of "Vacoliter Bottles." Foremost

was the loss of medicine because of the difficulty of pouring liquids from the wide non-lipped mouth of the container. Of almost equal importance was the loss of time incurred by the restrictive method of pouring, while with several medicaments it was always necessary to use a graduate as the medium of transfer. This caused a loss of time and effort in the washing of the third container. Another disadvantage was that in many instances a sugary crust was evidenced around the lip of the stock bottle as well as the bottles themselves always being sticky. It was therefore necessary to wipe the stock bottle thoroughly after using, which caused a further useless expenditure of time and energy.

Other disadvantages included the obliteration of the title name on the front of each stock bottle due to alcoholic dissolution and the friction created by the over wiping of the bottle and the corrosion of the metal screw caps which presented the problem of possible contamination.

All these deleterious factors have been satisfactorily eliminated by the application of the new apparatus. It is both simple in idea as well as in structure, and can be easily and inexpensively produced.



EXTRACTS SGO CIRCULAR 22, 1952

The following extracts from SGO Circular 22, 1952, are considered to be of interest to all medical officers in the Far East Command, and are, accordingly, published for information and guidance of those concerned:

TREATMENT OF MALARIA:

Use of Primaquin - A limited supply of Primaquin Tablets, 10 mgm, is available in the St. Louis Medical Depot for issue to installations where the treatment of recurrent malaria is a problem. The use of this drug as yet must be limited, for full therapeutic studies have not been completed. Preliminary reports indicate that many relapses of malaria may be pre-

vented by administration of Primaquin. At present, it appears that in combination with Chloroquine it is the most efficient drug for preventing such relapses. No toxic effects have been observed at the dosage level of 15 mgm daily. Toxic effects have been observed at higher dosage levels particularly in the Negro.

The recommended therapeutic dosage for treatment of vivax malaria is Primaquin, 15 mgms daily, for fourteen days administered in conjunction with the standard course of Chloroquine for the first several days of treatment. As new stocks of Primaquin are made available 15 mgm tablets will be issued in lieu of the 10 mgm tablets available at this time. Care should

be taken so that these tablets are not inadvertently administered interchangeably.

Use of Intravenous Quinine - At a recent Meeting of the National Research Council Subcommittee on Malaria, it was recommended that the use of Intravenous Quinine in fulminating falciparum malaria (cerebral malaria) be discontinued. The Subcommittee believes the intramuscular injection of Quinacrine or Chloroquine to be at least as effective as, and much safer than, intravenous injection of Quinine.

Steps are being taken at present to standardize for issue a solution of Chloroquine Hydrochloride for intramuscular injection. Such material is now available for nonstandard purchase. Quinacrine Hydrochloride is presently available as Standard Item No. 1-386-570 in the Armed Services Catalog of Medical Material.

HUMAN BLOOD AND BLOOD PRODUCTS:

Recent information would indicate that at present there is no practical means of treating products of human blood to completely prevent the possibility of transmission of viral hepatitis. Therefore, it must be remembered that when these products are to be used

there is a danger of transmitting hepatitis. This danger is greater in use of human plasma made or reconstituted from large donor pools. This is a calculated risk that must be borne in mind particularly when human plasma is prescribed.

LONG ACTING PENICILLIN:

Recent information indicates that Item No. 1-607-422, Procaine Penicillin G, Crystalline, in Oil, with Aluminum Monostearate, is not a satisfactory drug for general use in treating a wide spectra of diseases and wound infections. The low blood levels of Penicillin produced initially by administration of the drug in this form are not adequate in many instances for the most efficient results and peak levels following repeated dosage occur only after several days. It is recommended that in general the use of Procaine Penicillin in Oil with Aluminum Monostearate be limited to the treatment of venereal disease. Recommended dosage schedules will be presented in the new TB MED on Treatment of Venereal Disease soon to be published. A mixture of Procaine Penicillin and Crystalline Penicillin, in Oil, or better Procaine Penicillin in Aqueous Solution is the preferred drug for general use where a long acting Penicillin is desired.

ARTICLES SUBMITTED FOR PUBLICATION

The following is an extract from SGO Circular No.42, 1951, reprinted for information of all concerned.

SECTION IV. PUBLICATION OF PROFESSIONAL AND SCIENTIFIC ARTICLES BY ARMY MEDICAL SERVICE PERSONNEL.

1. Pursuant to AR 360-5, 20 October 1950, and Change 1, 12 February 1951, AR 40-1005, 17 November 1947; SR 360-5-1, 27 October 1950 and Change 1, 18 December 1950 and AR 380-5, 15 November 1949, Changes 1, 14 July 1950, and 2, 22 November 1950, the following procedure will be observed when submitting material on professional subjects prepared by personnel of the Army Medical Service for clearance prior to publication.

2. Publication of material based on clinical observations, results, and data accumulated in the Army is encouraged. Accounts of military medical experiences that add to or improve the existing literature are desired for publication in the U.S. ARMED FORCES MEDICAL JOURNAL.

3. Requirements for the submission of articles for review prior to presentation or publication are as follows:

a. Two copies of the article and all illustrations will be submitted to the Surgeon General through channels. The article will be typed with double spacing throughout and the pages numbered consecutively. Provided there is no objection to publication, the Surgeon General either will forward the article to a journal selected by the author or return the manuscript as the author desires. Arrangements for reprints for the author's personal use must be made directly by the author with the publisher and at no expense to the Government. After review and clearance, one copy of the article will be retained for the records of the Surgeon General.

(1) It is the responsibility of the author in submitting material to allow sufficient time for review and transmittal to and from Washington. In

addition it must be remembered that some subjects require time-consuming coordination with other government agencies as well as agencies of the Department of Defense. Final clearance cannot be effected until all indicated coordination has been completed. In order to avoid establishment of premature deadlines and the possible release of classified material, manuscripts or portions of manuscripts will not be submitted to publishers prior to review.

(2) Oral presentation of an article before a scientific society or a nonmilitary organization constitutes publication. If sufficient time is not provided for proper official clearance and the speaker is compelled to deliver a paper without clearance, or if the material is not submitted for clearance prior to presentation, the speaker assumes responsibility for publication. No action will be taken to clear for further publication material submitted subsequent to oral presentation.

b. The author's military title, including grade and corps, will be given; but academic degree, and society memberships will not be included. Previous civilian positions may be indicated in a footnote: e.g. "Professor of Medicine, Blank University." The author's military address may be published in conformance with security regulations. The names of superior officers who are not concerned in the authorship will not be mentioned.

c. Articles based, wholly or in part, on observation made at nonmilitary institutions before the author entered active military service should be indicated as such by a footnote.

4. Authors will be guided by the following policies in the preparation of articles for publication:

a. Articles will not be approved if they contain material which is:

(1) Contrary to paragraph 8, AR 310-10, dated 26 May 1949.

- (2) Not in accord with the facts or established principles of medical science.
- (3) Contrary to the policies of the Surgeon General in regard to professional practices.
- (4) Capable of being interpreted as representing, without authority, the official policy of the Army.
- (5) Harshly critical of an agency of the United States or other nations.
- (6) Malicious, trivial, or in conflict with the rules of medical ethics.
- b. The language should conform to a good standard of English, especially as to clarity and conciseness.
- c. Neither adverse criticism nor praise of individuals in the service is considered proper.
- d. Identification of patients by means of names, initials, Army serial numbers, or hospital numbers will be avoided.
- e. Army abbreviations not in common use in civilian life should not be used. Terms which have special meanings in military use should be explained: e.g. "disposition" and "classification."
- f. Conclusions should be based upon the data presented in the article.
- g. Tables, charts, and illustrations, should be

numbered separately on separate pages and supplied with adequate headings and legends.

h. Specific references should be made to pertinent previous studies. References not used in the preparation of the text or not read by the author will not be included. If an original reference has not been read by the author but is obtained from another source, it will be so indicated and the source quoted. The references will include the author's name, title and article, and the volume, page, and date of the publication; in the case of books, the publisher and place of publication should be added. The bibliography may be arranged in alphabetical or chronological order or in the order in which references occur in the text.

i. Exceptions to paragraph 5h above are authorized only when authors are preparing manuscripts according to the specifications established by a specific journal in which publication is desired.

5. Articles will not be published unless cleared by the Office of the Surgeon General and by the Security Review Branch, Office of Public Information, Department of Defense. When publication or presentation is authorized, a letter will be sent to the senior author with explanatory comment. If clearance is withheld for needed revision, this action will be indicated. Following revision, the article may be resubmitted accompanied by the original manuscript.

6. Section I, Circular 55, SGO, 1950, is hereby rescinded.

TB MEDS

ALPHABETICAL INDEX TO MEDICAL TECHNICAL BULLETINS WITH CROSS-REFERENCES

For the benefit of all Army Medical Service personnel, an index of current Medical Technical Bulletins (TB MEDS), except for medical and sanitary data of a geographical nature, are listed below for easy reference:

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AR 310-45, 31 Jan 52: Military Publications: Periodicals
AR 320-5, C-1, 4 Feb 52: Military Terms, Abbreviations, and Symbols - Definitions of "Department of Army," "Army Establishment," "United States Army," and other Terms.
AR 10-340, 6 Feb 52: Organization and Functions - Army Medical Service Corps
AR 40-10, 8 Feb 52: Medical Service - Medical Corps
AR 40-60, 8 Feb 52: Medical Service - Medical Service Corps
AR 40-30, C-1, 12 Feb 52: Medical Service - Contract Surgeons
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MEDIASTINAL MASSES

Harold A. Lyons, Commander, MC, USN

ABNORMAL masses occurring within the mediastinum can no longer be considered rare or even uncommon. An almost endless variety of lesions have been encountered in that location. Although many "tumors" discovered in that region prove to be of vascular origin, inflammatory in nature, herniae, or other masses which are not tumors in the strictest sense of the word, the mediastinum is a common site for true neoplasms. Many of these tumors are malignant. Others, though originally benign cannot be considered innocuous. By continued growth they may attain great size and cause serious illness or even death as a result of secondary pressure effects. Recent advances in anesthesia and thoracic surgery have greatly increased the importance of the early recognition of mediastinal lesions. It is now possible to remove most benign tumors and many malignant ones with relative ease and safety.

The increasing utilization of chest roentgenography as a result of mass X-ray surveys for the discovery of pulmonary tuberculosis, routine admission chest films in hospitals, pre-induction and annual physical examination chest roentgenograms by the military services, pre-employment films in industry, and the widespread policy of making a chest roentgenogram a part of the study of any patient undergoing chest examination has increased tremendously the number of mediastinal lesions seen by physicians. The discovery of a mass in the mediastinum immediately raises several questions. It is indeed a mediastinal lesion or does the pathology within the pulmonary parenchyma or in the pleural space? Is the lesion one that may be amenable to surgery or must other therapy be employed? Is it probable that the mass represents a benign tumor or is malignancy more likely to be present? Categorical answers to these questions are exceptional. More so is this true preoperatively. It is evident that an accurate histological diagnosis can be based on microscopic examination of the mass in question. In general, this implies that thoracotomy must be undertaken before a definitive diagnosis can be achieved. There is available, however, a multiplicity of diagnostic endeavors available for the study of masses thought to be situated in the mediastinum. We believe that an orderly investigation in such masses, employing those examinations which appear to be indicated in a given case, will enable one to verify the mediastinal position of the mass in almost every case and will usually reveal sufficient information to point out the proper management of the individual patient. It is obvious that not all of the recommended tests will be required in every case under study. Certain examinations are done routinely; others only rarely. The problem presented and the findings obtained on successive diagnostic procedures will point to the need for various additional special studies. Even though these studies fail, as they most often will, to establish an accurate preoperative diagnosis, they will make clear the indications for surgery and will provide the surgeon with information of inestimable value. The diagnostic measures that we employ are listed below. In our hands these procedures have been of most value in the study of these cases.

DIAGNOSTIC METHODS

A. THOSE ROUTINELY EMPLOYED:

1. History: Frequently there are no symptoms. Benign lesions give few if any symptoms and those present are usually the result of the secondary effects of pressure. Malignant masses may be asso-

ciated with constitutional symptoms. Pain most often denotes an invasive lesion.

2. Physical Exam: Most often negative. Percussion may show mediastinal widening. Signs of bronchial compression (wheeze) or abnormal cardiovascular signs (thrills, murmurs, rubs) may be present.

3. Posterior-anterior stereoscopic and lateral chest roentgenograms. These features are to be noted:

a. Extent: Unilateral: Usually benign. Bilateral: Usually malignant.

b. Border: Regular in outline and sharply circumscribed: Benign. Irregular with fuzzy or indistinct borders: Malignant.

c. Shape: Solitary, rounded or oval: Benign. Lobulated or multiple: Malignant.

d. Locations: Anterior mediastinum: Teratoid tumors, cysts and tumors of the heart and pericardium, thyroid lesions, thymic tumors. Mid-mediastinum: Lymphatic lesions, metastatic tumors, granulomas, bronchogenic cysts, aneurysms. Posterior mediastinum: Neurofibromas, esophageal lesions.

e. Lung parenchyma: Invasion: Malignant, Compression: Benign.

f. Pleural sinuses: Effusion, especially if bloody, favors a malignant tumor.

g. Growth rate: Rapid growth suggests malignancy. Hemorrhage within a benign mass may cause sudden enlargement.

4. Fluoroscopy: Points to be observed:

a. Pulsation: Expansile pulsation indicates a vascular lesion. It is often absent in aneurysms due to the presence of laminated clots. Transmitted pulsations are of no significance.

b. Movement with respiration: Failure to move with the lung on respiration usually establishes the extrapulmonary location of the lesion. Cystic masses may show change in contour with respiration.

c. Ascent on swallowing: Indicates a lesion of or attached to the esophagus.

d. Diaphragmatic movements: An elevated, paralyzed or paradoxical diaphragm indicates phrenic nerve involvement. Often seen with malignant masses, almost never with benign lesions.

5. Bronchoscopy: Most often negative but it is important to establish the extra-bronchial location of the mass. Pressure distortion is the most common finding. The aspirate is studied culturally and cytologically.

B. THOSE FREQUENTLY EMPLOYED

1. Potter-Bucky grid films: Especially indicated to delineate masses obscured by an effusion or pleural thickening.

2. Chest roentgenograms in oblique projections: Used when the information obtained from the standard films is inadequate to silhouette masses obscured by the normal mediastinal organs, osseous thoracic structures, or the diaphragm.

3. Barium swallow: Will show intrinsic lesions or esophageal displacement.

4. Angiocardiography: Clearly shows vascular lesions. Demonstrates pressure effects on vessels. Aids in precise localization of a mass.

5. Skin tests for specific granulomas: (Tuberculin, coccidioidin, histoplasmin).

6. Sputum studies: Smear, culture and animal inoculation for acid fast bacilli, fungi and other organisms. Papanicolaou stains for malignant cells.

C. THOSE EMPLOYED INFREQUENTLY:

1. Exploration of the deep cervical fat pad and the upper anterior mediastinum through a cervical approach: Positive nodes or a portion of the tumor proper may often be obtained.

2. Tomography: May show cavitation, calcification, and exact location. Will define major bronchial distortion.

3. Films after diagnostic pneumothorax, pneumoperitoneum, or both: Necessary at times to prove the intrathoracic and extrapulmonary location of the mass.

4. Upper gastro-intestinal series: Shows diaphragmatic hernia or malignant disease of the G.I. tract.

5. Esophagoscopy: Essential when esophageal pathology has been shown or is suspected.

6. Bone detail films: To study primary osseous lesions or the pressure effects of adjacent masses.

7. Peripheral blood and bone marrow studies: For information pertaining to masses of possible lymphatic origin.

8. Kymography: For graphic registration of pulsatile masses.

9. Bronchography: Indicated only occasionally to demonstrate bronchial compression or occlusion. Will show secondary bronchiectasis.

10. Contrast myelography: Provides helpful information in dumb-bell neurofibromas and anterior meningoceles.

D. THOSE RARELY USED:

1. Trial of irradiation: The usual indication is a bilateral lobulated mass where there is strong presumptive evidence that the mass or masses represent a lymphoblastoma. To be of diagnostic value, small dosage (300-750 r) must be employed and the mass must disappear in 3 to 4 weeks or sooner.

2. Barium enema: Used in the study of possible diaphragmatic hernia.

3. Retrograde angiography: May be indicated in a detailed study of a proved vascular mass.

4. Thoracoscopy: Used only when thoracotomy is strongly contraindicated and when other diagnostic methods have failed to establish the nature of the lesion.

5. Tracer dose of radioactive iodine: To study possible thyroid masses.

E. PROCEDURES USED WHEN CONDITIONS PERMIT:

1. Biopsy: Abnormal nodes wherever located should be biopsied for histological study and for culture. The necessity for biopsy of an endobronchial lesion is apparent. Liver biopsy is occasionally indicated.

2. Thoracentesis: Pleural fluid should be removed whenever present and subjected to cytological and bacteriological study. Repeat films after removing fluid for better delineation of the mass.

F. NOT USED AND NOT RECOMMENDED:

1. "Punch" or needle biopsy: May fail to yield representative tissue. May contaminate pleural space or injure lung, causing pneumothorax. Vascular structure may be entered with resultant hemorrhage. Malignant cells may be seeded along needle track.

G. THE MOST IMPORTANT DIAGNOSTIC PROCEDURE OF ALL AND THE ONE WHEREBY AN ACCURATE HISTOLOGICAL DIAGNOSIS IS USUALLY ESTABLISHED:

1. Thoracotomy: The mass is removed if possible. If excision cannot be accomplished direct biopsy is carried out. In either event, a definite histological diagnosis is established. When complete excision is accomplished, permanent cure is usually achieved. If the lesion is not amenable to surgery a positive diagnosis will permit the planning of intelligent subsequent therapy. The prognostic value of knowing the exact nature of a lesion is also of importance. Thoracotomy is therefore advised in all instances unless a certain diagnosis of non-surgical mediastinal lesion has been established by other means, except in cases presenting absolute contraindications to thoracic exploration. Since the procedure is usually well tolerated by even poor risk patients, such contraindications rarely arise.

CLASSIFICATION OF MEDIASTINAL MASSES

Below is listed a classification of most of the mediastinal masses usually encountered.

I. CYSTIC TUMORS

- a. Bronchogenic Cyst
- b. Gastroenterogenous Cyst
- c. Pericardial Coelomic Cyst
- d. Anterior Meningocele
- e. Cystic Hygroma

II. TERATOID TUMORS

- a. Dermoid
- b. Teratoma
 1. Benign
 2. Malignant

III. LYMPHATIC TUMORS

- a. Benign Lymphoma
- b. Hodgkin's Disease
- c. Lymphosarcoma
- d. Reticulum Cell

VII. LESIONS OF ESOPHAGUS

- a. Primary Carcinoma
- b. Leiomyoma
- c. Pharyngo-Esophageal Diverticulum
- d. Traction Diverticulum
- e. Megaesophagus (with achalasia)
- f. Esophageal Cyst

VIII. NERVOUS SYSTEM TUMORS

- a. Somatic Nervous System
 1. Neurilemoma
 2. Neurofibroma
 3. Neurofibromatosis (von Recklinghausen's Disease)
 4. Neurofibrosarcoma

(III) Sarcoma	(VIII) coma	(V) d. Anomalies of the Great Vessels	(IX) b. Osteochondroma
e. Lymphatic Leukemia	b. Sympathetic Nervous System		c. Lipoma
IV. GRANULOMAS	1. Ganglioneuroma	VI. THYMIC TUMORS	d. Liposarcoma
a. Tuberculoma, Tuberculous Abscess or Node	2. Sympathoblastoma	a. Thymoma	e. Fibroma
b. Boeck's Sarcoid	3. Sympathonioma (most primitive of all nerve cells)	1. Benign	f. Fibrosarcoma
c. Erythema Nodosum	c. Paraganglionic System	2. Malignant	X. MISCELLANEOUS
V. VASCULAR LESIONS	1. Pheochromocytoma		a. Metastatic Tumors
a. Aneurysm	2. Pheochromoblastoma		b. Intrathoracic Goitre
1. Great Vessels			c. Parathyroid Adenoma
2. Heart			d. Mediastinal Abscess
b. Hemangioma	IX. MESENCHYMAL TUMORS		
c. Cardiac Tumors	a. Chondroma	(NOTE: This report is based on work with the author's associate, Captain Clifford Storey, MC, USN).	
1. Primary			
2. Metastatic			

NOTES ON SMALLPOX IN THE FAR EAST COMMAND

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INCIDENCE of smallpox among allied personnel in the Far East Command has been marked by two distinct periods of high incidence, one in the winter of 1945-1946, and another in the winter of 1950-1951. Both of these outbreaks arose when large numbers of allied troops suddenly became associated with the population of Korea. Morbidity statistics for the native population of Korea are highly inaccurate. However, widespread endemicity in Korea was well recognized by the Japanese for many years.

Repeated severe urban epidemics stimulated limited vaccination programs sufficient to bring these epidemics under temporary control but adequate nationwide vaccination programs were never accomplished. During late 1945, after the arrival of American occupation personnel, 23 outbreaks of smallpox in the Korean population were reported by public health workers. In Japan, on the other hand, a nationwide vaccination program has been in operation for several decades, so that the national level of immunity in the native population of Japan has usually been high enough to prevent all but sporadic occurrences and occasional small limited outbreaks.

The one notable exception was the post-surrender epidemic of nearly 18,000 cases in Japan during the Spring of 1946.

The reported cases of smallpox among occupation personnel in Japan and Korea and among the indigenous population of Japan during the occupation years are shown in Table I.

Within two months after the arrival of American troops in Korea in the fall of 1945, American cases of smallpox began to appear. Between October and December, a total of 24 cases had occurred. Immediately after the recognition of the first case during the last week of October 1945, all military and civilian personnel in Korea were vaccinated. The command responsibility for immunization was emphasized and particular attention was given to avoid the introduction of unprotected replacements into Korea. Nine cases occurred in November and fourteen in December of 1945. The last case in U.S. occupational personnel had its onset on 26 December 1945, just two months after the first case appeared. It should be emphasized that these 24 American cases

did not occur in the same area and did not as a group represent a contagious chain. On the contrary, they arose from such distant and scattered points as Seoul and Wonju in the north and Mokpo and Pusan in the south.

The highly virulent form of smallpox which was encountered in Korea at that time is emphasized by the fact that at least 12 of these cases died. Seven of the fatalities were due to the purpura variolosa variety of smallpox and three to variola hemorrhagica pustosa. The other two were in cases of classical smallpox. Only two cases of mild or varioloid smallpox occurred; these were in individuals who had visible evidence of a previous vaccinia reaction. None of the other 22 cases had ever had primary vaccinia reactions prior to induction and only two of these 22 developed vaccinia reactions from army vaccination prior to coming overseas. It is noteworthy that a number of these persons who had never had primary takes had had one or more army vaccinations against smallpox with reactions recorded as immune.

In January 1946, close on the heels of the outbreak in Korea, 17 cases of smallpox occurred in U.S. oc-

TABLE I.

Reported Cases of Smallpox in Occupation and Other UN Personnel in Japan and Korea (exclusive of ROK'S) and in Japanese Nationals,* 1945-1951.

	Occupation and UN Personnel		Japanese Nationals
	Japan	Korea	
1945	0	24	1,614
1946	17	0	17,800
1947	0	0	391
1948	0	1	29
1949	0	0	124
1950	0	5	5
1951	1	34	86

*Annual Summaries, Public Health and Welfare in Japan, PH&W, GHQ, SCAP, 1948-50.

occupation personnel in Kyushu, the southernmost island of Japan.

It is of interest to note that these cases occurred in one of Japan's busiest port areas, in fact the port most commonly utilized by vessels plying between Japan and the southern ports of Korea. In this outbreak there were 10 deaths, 8 due to purpura variolosa and two to variola hemorrhagica pustosa. Thus, the fatality rate in these two forms of smallpox was again 100%.

During 1946, vaccination requirements for occupation personnel in Korea were boosted to every 6 months and within 60 days of departure from Korea, and yearly vaccination was established in Japan. These schedules have been maintained since that time. It was recognized that endemicity among the native population of Korea and possibly of certain parts of Japan immediately following the end of the war was sufficiently high to produce outbreaks in occupation personnel if even a fraction of a percent of American troops were inadequately immunized. Hence, great emphasis was placed not only upon complete coverage but on accurate interpretation of reactions and repeated vaccinations in all cases of doubt.

From 1946 to early 1948 sporadic reports of smallpox cases and deaths from all parts of Korea indicated that the disease continued unabated in the native population. In addition to internal spread, smallpox was probably being introduced by refugees who were streaming to South Korea from China and North Korea at the rate of one to four thousand per month.

In November 1948, a large outbreak of smallpox was reported among civilians in Seoul, Korea. This probably represented a true increase in incidence although previous reports were too vague to be certain. In November, 163 cases with 51 deaths, and in December 198 cases, were reported. Considerable public interest in the epidemic seems to have arisen as indicated by the fact that the entire city of Seoul was canvassed by teams of Korean physicians, medical students and police and occupation public health advisors, and all cases were transferred to the city's contagious disease hospital. This epidemic was not confined to Seoul but rather represented a period of Korea-wide high endemicity lasting well into May of 1949.

There were no cases of smallpox among occupation forces in the Far East from the spring of 1946 until late 1948 when one non-fatal case appeared in an Air Force sergeant in Korea in December. He had been missed during the 1948 vaccination program in Korea and had not been vaccinated since November 1947. The reaction at that time is not known. Following this case, no smallpox occurred among occupation personnel in the Far East Command until after the outbreak of the current Korean conflict.

Meanwhile throughout the latter half of 1949 and during all of 1948 smallpox was also rare in Japanese. Only 29 cases in 1948 and 124 cases in 1949 were reported in Japan. The 1949 cases were concentrated into two port areas of southern Japan and most cases occurred between March and June. A nationwide vaccination program was initiated in 1949 and completed in 1950, and is reported to have covered "nearly the entire population."

This seems to be supported by the fact that only 5 cases occurred in Japan during 1950 in spite of the sudden influx from Korea of smuggled refugees and

UN returnees and evacuees, among whom were a number of smallpox cases.

Thus despite continued high endemicity among the native population of Korea and sporadic occurrence in Japan, smallpox was effectively eradicated from Americans in the Far East Command, within four months after its initial appearance in October 1945. The disease was, for all practical purposes, non-existent in military personnel from early 1946 to the fall of 1950. Then at the beginning of the Korean war, many American troops, previously unexposed to the orient, made sudden and widespread contact with the Korean population. The first cases appeared in October 1950, and they continued to occur sporadically among UN forces in Korea until April 1951. One isolated case occurred in July 1951. A total of 39 cases were contracted in Korea by UN forces exclusive of Korean troops during the first year of the war. During that same period one fatal case occurred in a civilian who never left Japan. However, epidemiological investigation strongly suggested that the ultimate source of infection in this case was Korea. (See Smallpox Outbreak in Kobe, below). Only 17 of these cases were in U.S. Army personnel, more than half the cases having appeared in other American and other UN troops. The distribution of these cases by month and organization in the Far East Command since the beginning of the Korean conflict is shown in Table II. Out of the total of 40 cases, there were 14 deaths. Autopsy material on nine of these deaths was reviewed by the Department of Pathology of this laboratory. The diagnosis of classical smallpox was made in three cases, of variola hemorrhagica pustosa in three cases and of purpura variolosa in four cases. The case fatality rate for the latter two forms was again 100%. A discussion of the pathologic findings in fatal smallpox is presented in a report of the Department of Pathology. A brief account of the clinical findings in purpura variolosa is presented below. Variola virus was isolated from most of the cases on which material was submitted, and it was retrieved from whole blood, serum, skin, vesicular and bullous fluid and kidney.

It should be emphasized that in all cases on which immunization records were available, vaccination had not been carried out according to existing regulations. Either there was no evidence whatsoever of a previous primary vaccinia reaction or the latest vaccinoid or immune reaction had been recorded well over a year preceding onset. No fatal cases occurred in persons successfully vaccinated within three years of onset. It is regrettable to note that in several instances, including one fatal case, an immune reaction was recorded within two years, but on questioning the patients, it was found there had been no reaction whatsoever at the time of recording. This fatal case, a civilian in a fixed installation in Japan, had never experienced a primary vaccinia reaction in his life.

The incidence of smallpox in Japan rose to 86 in 1951. All cases occurred between February and July with a peak of 30 cases in March.

The peak month in UN personnel in Korea was likewise in March. The geographical distribution of cases in Japan is interesting in that 72 of the cases were reported from only four prefectures of southwestern Japan, whereas only one case was reported from the Tokyo-Yokohama area. Japanese health officers have considerable evidence to indicate that much of this smallpox was introduced from Korea. Cases and outbreaks were usually traceable to ports and fishing

TABLE II.

Smallpox in UN Personnel (exclusive of ROK)
FEC - July 1950 to Dec. 1951 Cases/Deaths

	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Cases	Deaths
<u>U. S. FORCES</u>																				
US Army			1/1		1/1	2/1	2/0	6/1	2/0										14	4
US Air Force				1/0						1/0			1/0						3	0
USMC			2/0				1/1	4/1											7	2
US Navy							1/0	1/1	2/0										4	2
DAC								1/1											1	1
US Mer. Seamen									2/1										2	1
TOTAL US			3/1	1/0	1/1	4/3	8/3	10/2	3/0				1/0						31	10
<u>OTHER UN TROOPS</u>																				
United Kingdom									1/0										1	0
Canada									1/0										1	0
New Zealand							1/1												1	1
Philippines								1/0	1/0										2	0
Turkey									3/3	1/0									4	3
TOTAL OTHER UN							1/1	1/0	6/3	1/0									9	4
TOTAL CASES			3	1	1	5	9	16	4				1						40	
TOTAL DEATHS			1	0	1	4	3	5	0				0							14

TABLE III.

SMALLPOX CASES - Kobe, 1951

Case No.	Nationality	Onset Date	Occupation	Date and Reaction of Last Vaccination	Clinical Type*	Outcome
1.	Japanese	9 Feb 51	Laundry Supply Officer	1947-Unknown	Typical-mild	Recovered
2.	Japanese	9 Feb 51	Dry Cleaning Plant Superintendent	May 1949	Typical-mild	Recovered
3.	Japanese	10 Feb 51	Laundry Ironer	May 1949 - Immune	Typical-mild	Recovered
4.	Japanese	10 Feb 51	Laundry Ironer	Unknown	Typical-mild	Recovered
5.	American	10 Feb 51	Laundry Manager	May 1949 - No Reaction	Typical-severe	Fatal
6.	Japanese	11 Feb 51	Dry Cleaning Plant Receiver	Unknown	Typical-mild	Recovered
7.	Japanese	12 Feb 51	Laundry Extractor	Not vaccinated during past 35 years	V. H. P.	Fatal
8.	Japanese	12 Feb 51	Laundry Folder	May 1949 - Unknown	Typical-severe	Recovered
9.	Japanese	12 Feb 51	Pimp	Reports Immune	Typical-mild	Recovered

*Typical - classical vesiculo-pustular variola
V.H.P. - variola hemorrhagica pustosa

villages engaged in sea traffic with Korea. For example, one outbreak of 13 cases in Yamaguchi Prefecture was traced directly to a Japanese fisherman who contracted smallpox during a series of undercover junkets to Korea.

A comparable situation in Kobe is described in detail below. UN medical personnel in Korea stated that smallpox was commonly seen among Korean nationals in 1951, however morbidity statistics were not compiled. Twenty-two cases of smallpox with one death occurred in North Korean and Chinese prisoners of war since the beginning of hostilities. The peak incidence was in March 1951.

SMALLPOX OUTBREAK IN KOBE.

During the second week of February 1951, nine clinically confirmed cases of smallpox suddenly appeared in Kobe, Japan. All nine cases had dates of onset from 9 to 12 February. Eight of the nine cases were employees of the Kobe Laundry and Dry Cleaning Plant, an occupation establishment. The other case was in a Japanese who was not associated in any detectable way with the laundry outbreak.

Of the 8 cases in the laundry and dry-cleaning plant, 7 were Japanese employees and one was an American civilian manager. This American case was mentioned in the preceding discussion. The cleaning establishment consisted of two adjacent but separate buildings, a laundry and a dry-cleaning plant. Six cases arose in laundry employees and two in the dry-cleaning plant. The cases are tabulated by order of onset in Table III, showing certain data discussed below.

A common human source in the form of an earlier unrecognized case, and a fomite source were originally considered. Neither a common meeting point nor a previously unrecognized case could be found. This search included review of employees' absentee records and attempts to discover a mild or unrecognized case. The fomite to which most and probably all patients could have been exposed was incoming unprocessed salvage material.

Salvage was being received at that time from several points in southwestern Japan through a Kobe port reclamation and salvage section and from a Marine Air Base. The Marine Corps material was being received directly from land units in Korea. Since cases of smallpox were occurring among UN troops in Korea at that time, it is quite possible that clothing and equipment from these or from mild unrecognized cases could have reached salvage piles either from parent units or from receiving hospitals. Virus could have persisted in a viable state in crusts and dried secretions on this material and its distribution would have been enhanced by the clouds of dust arising from such items as damaged sleeping bags.

The absence of cases in the Reclamation and Salvage Section personnel who sorted all material before it reached laundry personnel, suggests that the specific source might have been through the Marine Air Base. The Marine material was carried directly from the air field to the laundry with minimal handling.

It was not possible to ascertain which shipment of salvage material was responsible for exposing the cases. However, it was interesting to find that one shipment of sleeping bags was received on approximately 27 January and was sent to the laundry building by mistake. It was unpacked and when the mistake was discovered, it was repacked and carried to

the dry cleaning plant for processing. The entire maneuver required about three days. The significance of this observation is a matter of speculation; however, this was the only shipment of salvage material which actually entered both buildings. Furthermore, the interval between this episode and the outbreak is about two weeks, a plausible incubation period for smallpox.

An investigation of smallpox vaccination records of patients was interesting in that the most recent vaccination had been accomplished in May or June of 1949. The annual universal vaccination program for indigenous employees at Kobe originally scheduled for November 1950, had been omitted for administrative reasons. The one fatal Japanese case had not been vaccinated in 35 years. The fatal American case had been vaccinated in May 1949; his immunization register showed an entry of immune reaction at that time. However, questioning of the patient revealed that he had no reaction whatsoever and furthermore had no evidence of a previous vaccinia reaction.

Immediately after the appearance of the first cases, a universal vaccination program for both Japanese and occupation personnel of the entire city of Kobe was instituted. Probably, the dispatch and care with which this program was executed accounted for the fact that the outbreak did not extend beyond the primary cases. However, had the vaccination program in 1950 been carried out as prescribed, the occurrence of this outbreak would have been extremely unlikely.

PURPURA VARIOLOSA.

Clinically, the most striking aspect of the smallpox seen arising from Korea has been the high incidence of variola hemorrhagica pustosa and so-called purpura variolosa. As mentioned previously, these forms were also seen in Korea in 1945. Variola hemorrhagica pustosa was usually readily recognized as a form of smallpox since characteristic vesicles and pustules appeared at about the same time as in classical smallpox. On the other hand, because of the absence of typical variola lesions in purpura variolosa it is often not considered even in areas where smallpox is regularly occurring.

Of the 40 cases of smallpox reported in UN personnel since the beginning of the Korean war, 4 cases have been of the purpura variolosa variety. As in past experience, all cases were fatal. In three out of the four cases, a clinical diagnosis of smallpox was not made. Only after autopsy findings and smallpox virus isolations had demonstrated the true nature of the disease did medical personnel become alert to this entity, and the fourth case was readily recognized before death. These facts are all the more important since the application of protective measures was delayed or even omitted because of the failure to recognize cases before death. Because of this year's experience with the pitfalls which are encountered in dealing with purpura variolosa, a brief clinical account seems warranted here.

The first two or three days of disease usually presented symptoms and signs characteristic of almost any infectious disease. Severe backache was the only symptom which suggested the prodrome of smallpox. The first specific physical manifestation was a marked, generalized, dusky red, blanching flush on the second or third day. Superimposed upon this, there was in some cases, a discrete erythematous maculo-papular eruption. In others a morbilliform rash

was noted. Usually, within a matter of hours hemorrhages appeared in the sclerae and in the oral mucosa and petechiae began to appear on the skin of the trunk. Edema of the face, especially striking about the eyes, was usually seen. Gross hematuria, hemoptysis, hematemesis and bloody stools often appeared within a day after the appearance of skin lesions. The total white blood count rose rapidly to 20,000 - 40,000 per cu. m. and a leukemoid picture was noted. Immature members of the erythrocytic series were seen in the peripheral blood in all cases. As the hemorrhagic process advanced, it involved the entire skin surface producing large confluent purpuric blotches superimposed upon a marked erythema. The sclerae showed massive confluent hemorrhage completely obscuring the whites of the eyes. The bleeding time was markedly prolonged and injection sites bled freely and indefinitely. Bullae containing serosanguinous fluid developed, especially on the extremities, and large sections of epidermis were sloughed with ease. By the fourth to sixth day of disease temperature usually fell to normal or below and a shock-like picture developed. Whole blood transfusions had little effect. Respiratory embarrassment was marked and was apparently due to both severe bronchial involvement and pulmonary edema and hemorrhage. Death followed massive hemorrhages from the orifices in one case, but in the others it could be attributed to no one particular manifestation of the syndrome. Death occurred on the sixth to eighth day of disease.

As might be expected, a variety of diseases characterized by hemorrhagic diathesis were suspected clinically. Diagnoses of meningococcemia, epidemic typhus, acute myeloid leukemia, toxic non-thrombocytopenic purpura and epidemic hemorrhagic fever were entertained. In fact the earliest interest in epidemic hemorrhagic fever was aroused by certain similarities between the cases of purpura variolosa and the available clinical descriptions of epidemic hemorrhagic fever by Japanese workers. Later, when true epidemic hemorrhagic fever began to appear in UN troops, it was realized that the severe and fa-

tal cases of this disease did bear a certain striking resemblance to purpura variolosa and would probably present the greatest difficulty in differential diagnosis.

Perhaps the most helpful distinguishing features between purpura variolosa and epidemic hemorrhagic fever are the skin manifestations. Although epidemic hemorrhagic fever almost always shows a facial and shoulder flush, and frequently shows scattered small petechiae over the upper trunk, it has never shown the generalized deep flush or widespread, extensive, and later confluent ecchymoses seen in purpura variolosa. Bulla formation and massive sloughing of the skin have not been seen in epidemic hemorrhagic fever. Together with these findings epidemiologic features are often helpful in distinguishing the two. Epidemic hemorrhagic fever is thus far known to occur only in individuals with outdoor ground exposure and usually will be seen during already recognized outbreaks in which many milder cases are appearing. Smallpox among American troops is usually sporadic and is likely to be more common in indoor and urban environments. Finally, single cases of smallpox are rare. Purpura variolosa nearly always occurs in association with easily recognized cases of classical smallpox.

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INFECTIOUS MONONUCLEOSIS

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THE title of this paper might well be "The Great Imitator" because the disease may present itself with symptoms suggesting poliomyelitis, malaria, diphtheria, meningitis, infectious hepatitis, typhoid, or even leukemia. It is because of this and the morbidity that the disease is important and not because of the mortality. During the past two years, 91 cases of infectious mononucleosis have been admitted to the medical service of this hospital. At first glance, this figure does not seem large but one must consider this represents patients that were ill enough to require hospital care for a disease that has been considered benign, and of no serious consequences. The presenting symptoms have been many and have been those of practically every febrile illness that one can name. One man presented the typical symptoms of poliomyelitis while another appeared to have diphtheria and a tracheotomy was necessary.

The first discussion of the disease to appear in the literature is credited to Emil Pfeiffer who, in 1889, called attention to a symptom complex occurring in children which he considered to be infectious and of epidemic nature. The outstanding symptoms which he noted were hepatomegaly, splenomegaly, the swell-

ing of the lymph nodes along the posterior border of the sternocleidomastoideus muscle, and the failure of the glands to suppurate. It is interesting to note that no mention was made of the blood picture. The first report to appear in the American literature was submitted by West in 1896.

The term "infectious mononucleosis" was used for the first time by Sprunt and Evans in 1920. They noted that the lymphocytes in the peripheral blood were bizarre in appearance. An important contribution was made in 1932 when Paul and Bunnell discovered that blood serum from a patient with the disease may contain antibodies against sheep erythrocytes in a concentration far above the normal titer.

At the present time the etiology of this disease remains obscure. In patients with severe pharyngitis and the presence of an exudate over the tonsils, many organisms can be cultured from the throat. The recovery of certain fusospirochaetal organisms led investigators to believe that these might be the causative agents. These organisms are often found in the throat of a normal, well individual, however, and there is no evidence of their etiological importance. It is generally believed that a filterable

virus is responsible for the disease. Reports have appeared in the literature of the attempt to transfer the disease from one person to another, using human volunteers, but all experiments ended in failure.

Transmission presents certain puzzling features, but one must conclude that its contagiousness is low. For example, no attempt is made at isolation of cases, and they are treated on an open ward with no spread of the disease to other patients. Seldom does the disease appear in more than one member of a household. Among military personnel, the cases are widely scattered and the man having the disease usually has no knowledge of any other person having a similar illness. There are no records of a doctor or nurse contracting the disease from a patient. However, the appearance of sudden outbreaks suggests that there may be carriers.

Infectious mononucleosis is a disease largely of children and young adults but no age group is immune. Proven cases have been reported in children as young as 7 months and in adults 70 years of age. Most of the cases will be found in persons between the ages of 10 and 35. Of Pfeiffer's original 24 cases, 15 were under the age of 13 years. Much has been said of the frequency of the disease among medical students and nurses. This has been overemphasized. Sporadic cases, unless studied by the aid of repeated differential blood counts may be often overlooked, while medical students or nurses, promptly admitted for study and treatment, are almost certain to be diagnosed by routine methods of examination.

It is impossible to ascertain the incubation period because the mode of transmission is not known, thus making it impossible to know when or how the person was exposed to the disease. In general, the acute febrile stage lasts from 7 to 21 days. Barring relapses which may prolong the course as long as 6 months, the duration is rarely more than a month.

Symptoms at the onset are varied and may be suggestive of many diseases. Fever, chills, headache, dizziness, malaise, and retro-orbital aching are common complaints. Fatigue, asthenia, and prostration may seem out of proportion to the apparent severity of the illness. Irritability at the onset and during the course of the illness is often marked. Anorexia is common and may present a problem for several weeks. The symptoms of an upper respiratory infection such as rhinitis, hoarseness or cough may be present. Pain in the neck, combined with stiffness, may occasionally herald the onset. Recently, a patient was admitted to the hospital complaining of weakness, chills, generalized aching and pain in the neck. There was some nuchal rigidity and stiffness of the back. He had difficulty assuming a sitting position. At first it was believed that he had poliomyelitis. Further tests proved that he had infectious mononucleosis.

Sore throat is frequently present, but it is not an essential feature of the disease. When present, it is often severe and does not respond to antibiotics. Many times one finds a grey membrane covering the pharynx. In some respects this appears much like the membrane of diphtheria. It is not uncommon to see a patient who is unable to swallow and must be maintained on intravenous fluids. This can lead to enough edema to cause respiratory difficulties. As stated previously, one patient required a tracheotomy to provide a clear airway. Infectious mononucleosis should be considered in any case of sore throat that is prolonged and does not respond to therapy.

Fever is usually present but occasionally one sees completely afebrile cases. When present, it usually appears promptly, may reach a peak within several days, but generally not for 4 to 8 days. The fever usually assumes a remittent form with afternoon rises. This rise may be slight and never above 99° to 100°. On the other hand, the patient may be acutely ill with a temperature of 104° or 105°. Perspiration is often profuse between rises in temperature.

Much could be said regarding the time of appearance, size and distribution of enlarged lymph nodes. The presence of these nodes may be the first indication of illness. They may appear suddenly, and enlargement is noted in 12 hours or less, however, there is usually a period of several days before any abnormalities are noted. The duration is variable, it may be as long as a year, or as transitory as 1 to 2 days. The cervical nodes are most frequently involved and these are usually found along the posterior border of the sternocleidomastoid muscle. Suppuration of the nodes rarely occurs. They are of moderate size, discrete, and are usually nontender to pressure. Enlargement of the nodes is not confined to the neck but may be found in the axillary, inguinal, submental or submaxillary regions. Enlargement of the mesenteric nodes may give rise to abdominal pain.

Puffiness of the eyelids may be present. Occasionally this may involve part of the face or the entire face. The periorbital edema may be as striking as that seen in trichinosis. Another finding that may be associated with this is a dry, granular type of conjunctivitis, often being unilateral in character. Some writers have found this peculiar abnormality in 8 or 9% of their cases. Recently, one patient in this hospital exhibited this phenomenon, the conjunctivitis being present in the left eye.

Splenomegaly is usually mentioned as a symptom of this disease. Writers report a wide variation in its percentage of incidence, varying from 10% to 50%. If present, it is usually demonstrated by the end of the first week but may appear later. The splenomegaly usually recedes at the same time as the lymphadenopathy. However, the organ may remain enlarged for weeks or even months. Bernstein described a patient whose spleen descended 8 centimeters below the costal margin during the acute illness. There was still demonstrable enlargement 7 years later.

A more serious complication referable to the spleen which has been observed is spontaneous rupture of that organ. About 13 such cases have been reported in the literature and 5 deaths have resulted. In 1941, Kind reported the case of a young man, who, at the height of his disease, suddenly developed the picture of an acute abdominal complication with shock. He was taken to surgery and it was discovered that the spleen had ruptured. Splenectomy was performed and the patient recovered. Similar cases have been reported by Ziegler, Darley, and others. Knowledge of this potential danger should make us exercise care in repeated palpation of markedly enlarged spleens.

The liver is enlarged less commonly than the spleen. The edge of the liver may reach a point 6 or 7 centimeters below the costal margin. Jaundice may be present and this can appear in the absence of an enlarged liver. Mackey and Wakefield described the first case of this sort. In a series of 34 cases of infectious mononucleosis, Wechsler found jaun-

dice in 6%. The jaundice has been credited to both hepatic and glandular obstruction of the hepatic ducts. More recent studies of liver biopsies, autopsy material, and various liver function tests have indicated that the jaundice is actually due to a hepatitis rather than obstruction of the ducts by enlarged nodes. When transient jaundice occurs in a young, healthy individual, one should think of this disease. The duration and severity of the jaundice is much less than the usual case of infectious hepatitis.

Kidney involvement may be associated with infectious mononucleosis. This usually appears in the first or second week and hematuria may be the initial symptom. The abnormal constituents of the urine are predominately red and white blood cells and albumin; less commonly, hyaline and granular casts are observed. Oliguria is an exception; there is neither edema nor retention of nitrogenous products. Renal function remains unimpaired, the course is benign and recovery is rapid and invariable.

At this time it might be pointed out that the urinary findings together with headache, fever, and the lymphadenopathy are symptoms not too much different from the early signs of epidemic hemorrhagic fever. This is mentioned only because some cases of infectious mononucleosis could be diagnosed as hemorrhagic fever before the other signs appear.

Symptoms referable to the central nervous system have been observed. The involvement can be severe and death has resulted in at least seven cases. One symptom common to practically all cases is headache. Other symptoms described are difficulty in speech, sluggishness, mental confusion and ptosis. The picture may be that of a Guillain-Barre syndrome. Other patients exhibit weakness of groups of muscles or even isolated muscles. One report appears in the literature describing paralysis of the serratus magnus muscle, occurring in the third week of a typical case of infectious mononucleosis. The spinal fluid may be normal or there may be an increased number of lymphocytes.

Cardiac disturbances in infectious mononucleosis are unusual. Ventricular extrasystoles may be found. Occasionally one may find certain electrocardiographic changes such as abnormal T waves and prolonged P-R intervals. These findings will disappear as soon as the acute illness subsides and there are no undesirable sequelae. The effect of a severe attack of the disease upon an individual with an already damaged heart may be to bring an acute cardiac failure.

Many types of skin eruptions have been described. The occurrence of a true thrombocytopenic purpura is rare but a few cases have been described in the literature. An eruption much like that seen in typhoid is often seen. This maculo-papular rash appears usually between the 4th to 7th days, most commonly on the 4th or 5th. A morbilliform eruption may appear and may become confluent, leaving a temporary residual pigment. Other types which may appear and have been observed are described as scarlatiniform, typhus-like, urticarial, and vesicular.

The blood picture is interesting as well as informing. In infants and children the earliest change in the blood may be an increase in polymorphonuclear leucocytes with a shift to the left followed later by a lymphocytosis. A similar condition may be

found in adults. On the other hand, one may find a leucopenia early in the disease followed by a leucocytosis and a high lymphocyte count. In the presence of leucopenia, lymphocytosis, or a combination of these two factors, there may develop a neutropenia at times attaining profoundly low levels. The percentage of lymphocytes may be as high as 90. The erythrocyte count and hemoglobin are usually normal.

The abnormal or atypical lymphocyte deserves some comment. Bernstein describes it in the following manner. The cell is variable in size, shape and staining properties. It ranges in size from that of a small lymphocyte to that of a monocyte. The nucleus, which may occupy a portion or almost all of the cell, may be round, bean-shaped, or irregular, centrally or eccentrically situated, and typically darkly or coarsely stained. The cytoplasm may be light but characteristically is deeply basophilic and vacuolated; a few azurophilic granules may be present. A small number of these cells, as well as the normal small lymphocytes, may show fenestration in the nuclei, an appearance produced by actual holes piercing the nucleus in various directions.

The sheep cell agglutination or heterophile antibody test is of great diagnostic importance in this disease. The time at which the test becomes positive cannot be stated with certainty. It is probably safe to say that the test is positive, if it is going to become so at all, where the test is first performed, for it is usually not until 4 to 5 days have elapsed that the correct nature of the illness is suspected. Some writers say that the test may become positive as early as the third day, but sometimes not until the second month or not at all. An elevated titer may disappear as rapidly as two weeks after its appearance. One can say that a positive test supports the diagnosis of infectious mononucleosis but a negative test may not rule it out. Cases with positive agglutination tests vary from 43% to 100%, with most authors reporting 80% to 90%.

What constitutes a significant titer? There has been a considerable argument concerning this question. Some say a titer of 1:32 is sufficient while others maintain it must be at least 1:160. We are content to follow the criteria set down by Paul, one of the originators of the test. He suggests that titers of 1:10 to 1:40 be considered negative; 1:80 to 1:160 suspicious; and titers above 1:160 positive.

Another confusing feature is the false positive serologic reaction for syphilis seen in some cases of infectious mononucleosis. Apparently Parkes-Weber, in 1930, was the first to recognize this fact. The number of cases in which this is seen is extremely small. This is particularly true with the more recent methods of doing these tests. Some writers state that it occurs in from 3% to 10% of patients. If it does occur, the test will probably return to normal within about 9 weeks.

The prognosis in this disease is favorable and the patient is usually well within 3 to 4 weeks. Relapses and recurrences have been reported but they are generally absent. In some cases, the lymph nodes may remain enlarged for several months and the patient may feel badly for a long time - as long as 3 or 6 months. Deaths from the disease have been reported. Spontaneous rupture of the spleen and central nervous system involvement account for the majority of reported deaths. Other

fatalities have been reported in which death was attributed to pulmonary complications such as bronchopneumonia and empyema.

There is no specific treatment for the disease. The treatment is symptomatic. Patients who have severe sore throat should be watched carefully in order that proper fluid balance is maintained, since some of these patients may be unable to swallow. If edema of the throat is marked, a proper airway must be maintained. A patient with an enlarged spleen should be kept relatively quiet because of danger of spontaneous rupture of that organ. When jaundice is present, the diet should be high in carbohydrate and protein. All of the antibiotics have proven unsuccessful. At one time it was thought that chloramphenicol might be of benefit but this has not been proven conclusively. Penicillin has very little effect on the pharyngitis and tonsillitis even when the streptococcus is cultured from the throat.

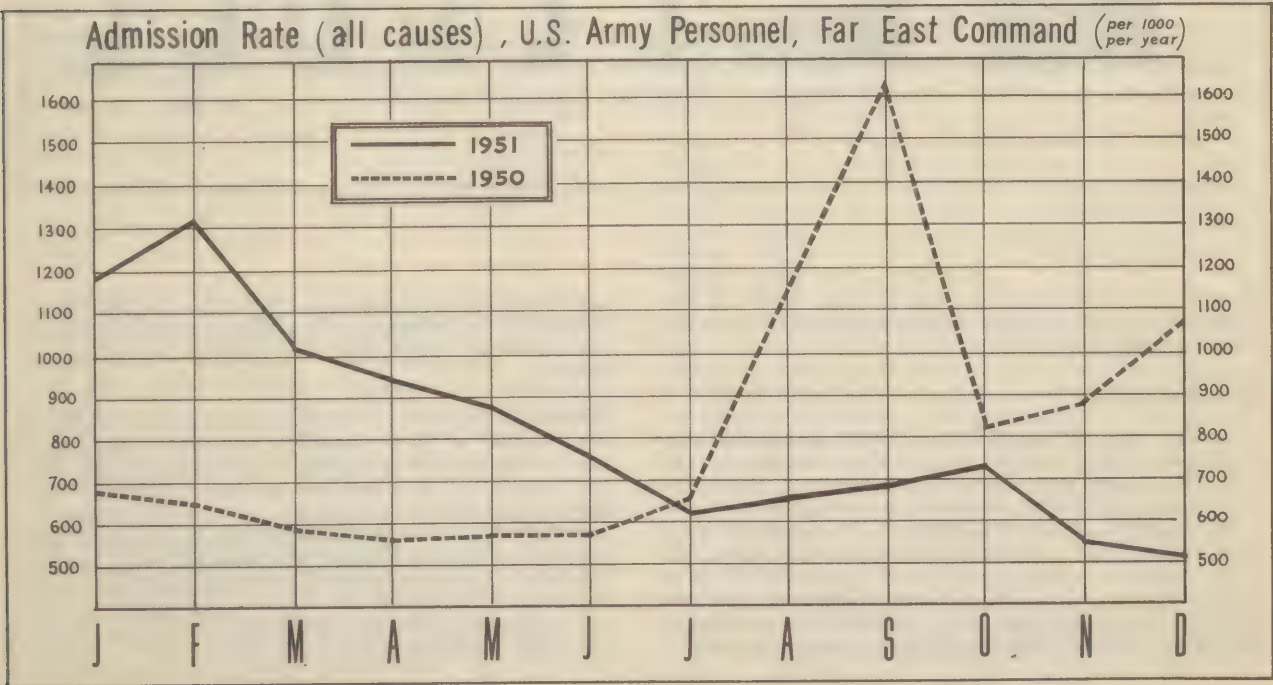
It is hoped that this review of the complex problem of infectious mononucleosis will be of some aid in recognizing the disease. Although the prognosis is almost always favorable, the serious consequences, such as rupture of the spleen, central nervous system involvement, and difficulty with respiration, must be remembered. The diversity of the manifestations of infectious mononucleosis is emphasized. Bearing these facts in mind, perhaps the cause of many cases of fever of undetermined origin may be found.

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HEALTH OF ARMY TROOPS, FEC



Admission rates per 1,000 troops per annum, Army Personnel, for the four-week period ending 26 December 1951, were as follows:

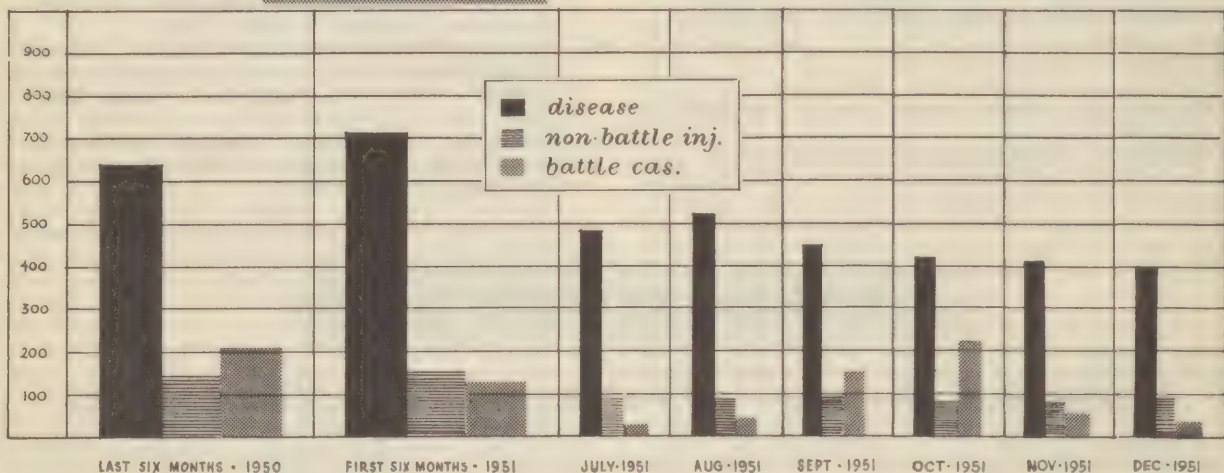
	FEC	JAPAN	KOREA	MARBO	PHILCOM (AF)	RYCOM
All Causes	519	456	559	417	236	346
Diseases	400	393	411	290	209	300
Injuries	95	62	112	126	27	46
Battle Casualties	24	0	36	0	0	0
Psychiatric	23	18	26	13	9.1	9.2
Common Respiratory Diseases and Flu	80	103	72	25	82	43
Primary Atypical Pneumonia	2.8	2.4	3.1	0	0	0
Bacillary Dysentery	.57	.36	.70	0	0	0
Amebiasis	.74	.83	.75	0	0	0
Malaria, new	1.8	1.5	1.9	0	36	0
Infectious Hepatitis	7.4	6.9	7.4	0	0	12
Dermatophytosis	3.5	3.6	3.3	13	9.1	4.1
Rheumatic fever	.21	.24	.22	0	0	0
Venereal Diseases	185	212	178	0	109	124

DAILY NON-EFFECTIVE RATE

All Causes	27	68	8.9	10	34	10
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admission rates

DISEASE, NON-BATTLE INJURY & BATTLE CASUALTY
(per 1000 per year) U.S. ARMY PERSONNEL, FEC



Health of the Far East Command for the month of December 1951 (unless otherwise specified) refers to Army personnel only.

ADMISSION RATES:

Disease: The disease admission rate to all medical treatment facilities in the Far East Command was 400 per 1000 troops per annum during December. A downward trend in the incidence of disease has continued since August. The Japan rate of 393 remained the same. The Korea rate dropped slightly in spite of an increase in common respiratory diseases and venereal diseases. PHILCOM (AF) and RYCOM reported decreases in the disease rate. Infectious hepatitis, malaria, neuropsychiatric conditions and hemorrhagic

fever rates decreased. No epidemics were reported in the command. Two cases of poliomyelitis and one case of scarlet fever were reported from Korea.

Nonbattle Injuries: The Far East Command nonbattle injury rate of 95 continues a downward trend maintained throughout the year. The December rate for 1950 was 201. This decline is more pronounced in Korea where the rate dropped from 300 for December in 1950 to 112 for the same period this year. The lowest, a rate of 186 for the command occurred in October. Approximately 8% of all nonbattle injuries reported in December were the result of motor vehicle accidents, 3% from participation in athletics and 8.3% due to cold injuries.

Battle Casualties: The Korea battle casualty rate of 36 for December is the lowest for the year. The highest rate for 1951 was reported in February when the rate rose to 363.

DAILY NON-EFFECTIVE RATE:

The daily non-effective rate for the Far East Command was 27. The Korea non-effective rate of 8.9 was the lowest since the beginning of the Korean conflict. The Japan non-effective rate for December was 68 as compared to 93 for the same period in 1950.

DISEASES:

Common Respiratory Diseases and Influenza: The Far East Command rate of 80 in December for common respiratory diseases and influenza was an increase from the 67 rate for the previous month. This rate is favorable when compared to the 129 rate for December last year. The Korea rate increased from 50 to 72, while the Japan rate of 103 remained static.

Psychiatric: The incidence of psychiatric conditions continued to decrease from 27 for the previous month to 23 for December. Again, the rate in Korea decreased. Increases were reported in Japan and RYCOM. (PHILCOM (AF) and MARBO each reported one case).

Infectious Hepatitis: The infectious hepatitis rate in the Far East Command decreased slightly in December to 7.4. The rate has remained practically static since September. In Korea, the rate reflects a steady decrease from 15 in August to 7.4 in December. The Japan rate of 6.9 is the same as for December of last year. The Japan rate represents only those cases of hepatitis occurring in troops stationed in Japan. All cases of hepatitis contracted by patients transferred from Korea are charged back to Korea in computing rates for the commands concerned. The RYCOM rate is 12 as compared to 13 for the previous month. PHILCOM (AF) has reported no cases since May, and MARBO none since October.

Venereal Diseases: The rate for "new" venereal disease in the Far East Command reflected a rise from 173 in November to 185 in December. Korea and PHILCOM (AF) contributed to this rise, Korea by an increase from 154 in November to 178 in December, and PHILCOM (AF) from 55 to 109 for the same periods. The most noteworthy change in the venereal disease rate is the sharp decline in RYCOM, from 155 in November to 124 in December. This is the lowest rate in RYCOM for the year.

Cold Injuries: During the month of December, 216 cases of cold injury were reported among troops serving in Korea as compared to 225 cases reported for the last week in November. The total number reported for the months of October, November, and December was 449 as compared to 2319 cases reported for the same period in 1950. Fifteen (15) cases were reported during December in U.S. troops training in northern Japan.

Hemorrhagic Fever: Epidemic hemorrhagic fever, which reached its highest incidence during the first two weeks in November, continued to decline during the month of December. An analysis of individual reports shows that 48 new cases had their onset in the first week in December; 47 the second week; 36 the third week, and 18 the fourth week. Among these

cases there were 3 deaths.

DEATHS:

During the December report period, 48 deaths of U.S. Army personnel occurred in medical treatment facilities in the Far East Command. Of this total, 14 were battle casualties, 2 of the deaths occurring after evacuation to Japan. Fifteen (15) deaths resulted from disease, and 19 from nonbattle injuries. MARBO reported one death from disease, while no deaths were reported by RYCOM and PHILCOM (AF).

HEALTH OF THE FAR EAST COMMAND FOR THE CALENDAR YEAR 1951:

The admission rate for all causes for the Far East Command in 1951 was 789 as compared to 824 in 1950. This decrease was largely due to a decrease in the disease rate for 1951 to a level comparable to the ratio in 1948 and 1949. In 1951 the admission rate for disease was 557, a reduction of 6.4% from the rate of 595 for the year 1950. The decrease in the disease admission rate was most marked in Korea, falling from 832 in 1950 to 602 in 1951, a reduction of 27%. However, the disease admission rate was also lower in all other major commands except MARBO where it increased slightly.

Among the principal diseases giving cause for concern in the Far East Command during 1951 were infectious hepatitis, smallpox and epidemic hemorrhagic fever.

Infectious Hepatitis: In November 1950, the incidence of infectious hepatitis in the Far East Command began to rise, reaching a peak in April 1951, after which the incidence decreased until September when it leveled off to a relatively constant rate of 7 to 8 per thousand. During the year there were 4,400 cases. This increase was most marked in Korea, 3,562 cases having occurred among those troops in the Eighth Army. So far there has been no indication of a similar increase during the Winter 1951-52. However, it is too early to predict that there will not be an increase before this winter is over.

Smallpox: In February, March, April and May there were a number of cases of smallpox in US Forces stationed in Korea. Two cases occurred in February, 6 in March, 4 in April and 1 in May. At the same time, in southern Japan, there were 2 cases, both originating in Korea; one in a soldier and one in a merchant seaman. A third case developed in a civilian employee. Prompt isolation of patients, quarantining of contacts, revaccination of contacts and increased emphasis on proper immunization against this disease throughout the Far East Command prevented further cases during the year.

Epidemic Hemorrhagic Fever: Beginning in June, a disease never before encountered by US medical personnel occurred in UN Forces in Korea. This disease, previously experienced by the Japanese in Manchuria was known as epidemic hemorrhagic fever. It continued to occur in UN troops in Korea throughout the fall and winter, reaching a peak in November. At the end of the year cases were still occurring, although in diminishing numbers. The total number of cases reported as of 3 January 1952 was 1,017, of which 918 cases were in US troops.

Malaria: Malaria was recognized as a potential threat to the health of US troops in Korea in 1950 and steps were taken shortly after the onset of hostilities to control its occurrence by the use of chloroquine once

weekly as a suppressive drug. The use of this drug was supplemented by mosquito control measures on the ground. In 1951 these control measures were augmented by the use of aerial spraying with DDT and carried out by FFAF in coordination with Eighth Army. These measures have been very successful and the highest rate of admission for malaria occurring in Korea was 18 per thousand per annum during the months of June and July. The effectiveness of chloroquine as a suppressive was in part demonstrated by the occurrence of malaria in Korean veterans after their return to the United States and to Japan for further duty.

Malarial rates in Japan rose to a high of 42 per thousand per annum in June 1951, as contrasted to a peak of 4 per thousand per annum occurring in 1950. It is probable that nearly all cases of malaria developing in Japan were contracted in Korea and suppressed there through the use of chloroquine. A new drug for the effective treatment of latent malaria has been developed and since mid-December 1951 has been routinely given all Army personnel having service in Korea who are returning to the United States by water. In RYCOM, malaria, which was insignificant in 1950 showed a moderate increase in 1951, with a peak rate of 13 occurring during the month of June.

Encephalitis: The following data include all clin-

HOSPITALIZATION: (These data cover all patients, Army, Air Force and others.)

The percent of designated beds and operating beds in Army Hospitals occupied as of 26 December 1951 was as follows:

	<u>Percent of Designated Beds Occupied</u>	<u>Percent of Operating Beds Occupied</u>
JAPAN	58	68
KOREA	43	36
MARBO	6	3.1
PHILCOM (AF)	50	43
RYCOM	<u>46</u>	<u>54</u>
FEC	53	56

The bed status as of 26 December 1951 was as follows:

	<u>Designated Beds</u>	<u>Operating Beds</u>	<u>Average Beds Occupied</u>	
			<u>All Patients</u> <u>Army Hospitals</u>	<u>Army Patients</u> <u>USAF Hospitals</u>
JAPAN	13,250*	11,212	7,630	360
KOREA	4,500	5,382	1,925	2
MARBO	200	390	12	0
PHILCOM (AF)	100	116	50	4
RYCOM	<u>400</u>	<u>344</u>	<u>185</u>	<u>0</u>
FEC	18,450	17,444	9,802	366

In Korea, there were 13,000 PsW operating beds, 9,291 of which were occupied.

(*Includes 2,000 TD Beds)

EVACUATION:

Tabulated below is the number of patients (all types of personnel) evacuated from the major commands to the ZI during the four report weeks in December.

	<u>By Air</u>	<u>By Water</u>	<u>Total</u>
JAPAN	1,388	7	1,395*
MARBO	2	0	2
PHILCOM (AF)	13	2	15
RYCOM	<u>61</u>	<u>1</u>	<u>62</u>
FEC	1,464	10	1,474

(*1,131 patients originated from Korea)

ically diagnosed cases occurring among military and civilian personnel treated by US military hospitals.

In 1950, 357 cases of encephalitis were reported in the Far East Command, a large majority of which were Japanese B encephalitis. By far, the most cases occurred in Korea where 304 cases were reported for the months of August, September and October. In 1951 the total number of cases of encephalitis in the Far East Command was only 66 of which 21 occurred in Korea. Of the total cases, only 7 were definitely proven to have been Japanese B encephalitis. Intensive mosquito control measures in Korea were probably a factor in the decreased incidence of encephalitis. However, climatic conditions were also unfavorable for mosquito propagation. The relative effect of adverse climatic conditions on one hand and the mosquito control measures on the other are not known.

Immunization against Japanese B encephalitis which has been practiced routinely in the Far East Command for a number of years will not be done in 1952. Evaluation of this program as a means of preventing infection has resulted in a decision by the Department of Defense to discontinue its use. This decision is based on the finding that there is insufficient evidence to indicate that the immunization procedure was an effective prophylactic against the disease.

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Brigadier General William E. Shambora, Surgeon, FEC:

"On this, the 51st anniversary of the Army Nurse Corps, I extend warm greetings and best wishes to all Army nurses.

"For over half a century your skilled ministrations have soothed the sick and injured. You have prevented much suffering and you have saved countless lives -- not only those of our forces, but all other forces as well, including the enemy.

"I congratulate and commend all Army nurses in whatever land they may be serving.

"Some of you have become almost legendary figures in your exploits in the past and present military campaigns. All of you have ably fulfilled the oath of obligation you accepted upon entering your profession.

"Particularly do I want to congratulate the nurses serving in the Far East Command -- in Korea, Japan, the Philippines and the Ryukyus. I deeply appreciate your untiring efforts, your loyalty to your country and your profession, and your willingness to serve under conditions which are, in many cases, far from ideal. Your skill and your devotion to duty have been indelibly recorded in the annals of military history -- you have performed nobly.

"I trust and believe that in the years to come, your actions and deeds will prove no less illustrious."



Colonel Ruby F. Bryant, Chief, Army Nurse Corps:

"On the 51st anniversary of the Army Nurse Corps, I would like to extend my greetings to the Army nurses wherever they may be serving throughout the world.

"To the nurses in Korea, I extend a special greeting and appreciation from all Americans for your courage, fortitude and devotion to duty -- many times under adverse conditions.

"On my recent visit to Korea I was extremely proud of you and of the splendid manner in which you are rendering nursing care -- not only to the American soldier, but to the United Nations soldier as well.

"Your resourcefulness and ability to adjust to any situation does credit to your family, your school of nursing and the Army Nurse Corps."



Lt Colonel Alice M. Gritsavage, Chief Nurse, FEC:

"On the occasion of the 51st anniversary of the Army Nurse Corps on February 2nd, I want to express my personal appreciation to you and the nurses under your jurisdiction for the splendid work you are doing. The cheerful and faithful service which, under adverse conditions, you nurses are providing to the sick and wounded is a standard of nursing care of which I am proud.

"Your devotion to duty, unselfish service, and your proficiency is a high tribute to the nursing profession and a noteworthy contribution to the record of the Army Nurse Corps. On this anniversary of the Army Nurse Corps, I congratulate you and thank you for the work you have done and are still doing in assuring our fighting men and their families of the best of nursing care."



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The Chief Surgeon extends an invitation to all Far East Command medical personnel of the U. S. Army, Navy and Air Force, or of the United Nations, to prepare and forward with view to publication, articles of professional or administrative nature. It is assumed that editorial privilege is granted unless author states otherwise.

Capt. Charles A. Copeland, MSC EDITOR

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